

**RECEIVED  
CENTRAL FAX CENTER****JAN 24 2011**

Serial No. 10/578,871

**REMARKS**

The amendment to the independent claims is supported in Fig. 5 and the related text at pages 14-15. The middle column of Fig. 5, labeled "PITCH OF RESONANCE," exemplifies the claimed resonance pitch. The Examiner is invited to note the added keys listed in the middle column of Fig. 5, namely (reading downward), +19 keys, +24 keys, +19 keys, and +12 keys, which exemplify the claimed "third pitch" in the claims.

Formal amendments are also made. In response to the outstanding action:

(1) The RCE is noted.

(2) Claims 12 and 13 are objected to on the basis of "if," which the Examiner asserts is indefinite. This objection is respectfully traversed on the grounds that "if" is the correct word for a conditional statement (i.e., a logical "if ... then"). The claims are now amended to use the word "then" so as to clarify this feature. With respect, the Examiner's suggested word "where" relates to location.

(3-4) Claims 1, 4, and 9-15 are rejected under 35 U.S.C. § 102(b) over Assayag et al., US 5,854,438. This rejection is respectfully traversed. The Examiner asserts anticipation by col. 9, line 63 to col. 10, line 5 of the reference, using musical notes "(D)" and "(G)" as examples. Inserting these examples into the last two paragraphs of claim 1 would result in

wherein a position, which generates the musical sound set in advance based on the specific relation between the pitch of the played key [D] and the pitch of the depressed key [G], *is a position of the depressed key [G] ...*

where the italicized text is not mentioned in the rejection.

*Serial No. 10/578,871*

In the applied example, G is played before D (col. 9, line 32). In all of the text in column 9 that is applied by the Examiner, Assayag only mentions four notes, which are 55, 62, 74, and 86. The first is a G and the next three are all Ds in octave relationship. Assayag discloses playing of the G 55 key, and then (col. 9, line 47), "activation of sympathetic notes" which are the two octaves of D, 74 and 86. Then comes "activation of the base note D" and "activation of the sympathetic notes by D excited with the free G," which are the same two octaves of D (74 and 86) that are already sounding and which are stated to be the third and sixth harmonics of G.

The newly applied text explains that when the D 62 key is released but the G 55 key remains depressed, the two octaves of D, 74 and 86, continue to sound at reduced volume, and that all sound stops when the G 55 key is also released.

D 74 and D 86 are apparently two resonances of G which are played following: "free G" (line 39), which means that the G 55 key is not yet played; "excited G" (line 41), which means that the G 55 key is now played; and "activation of the base note, G ... 55" (lines 43-44), which means that the electronics are producing a sound at pitch 55. Line 45 refers to "free D," apparently meaning that the D 62 key is not yet played, and the next few lines disclose "activation of sympathetic notes" D 74 and D 86.

Thus, only *after* the two resonant notes D 74 and D 86 are already sounding, do there occur the steps of "excited D" and "activation of the base note D" at lines 52-55 (i.e., the playing of the D 62 key occurs after the resonances are already sounding). Furthermore, the playing of the D 62 key does not change the sympathetic notes,

*Serial No. 10/578,871*

because D 74 and D86 remain sounding, and no new notes are added. They only result of playing the D 62 key is that the volume of D 74 increases from 17 to 18 (lines 48 and 58).

**Specific Relation.** In view of the fact that playing the D 62 key does not change the resonance, it is respectfully submitted that the claimed feature of “a musical sound generator generating a predetermined musical sound *based on the specific relation* between the pitch of the played key and the pitch of the depressed key” is not disclosed by Assayag.

**Third Pitch.** The claimed third pitch is not disclosed, nor is selecting a third pitch from a data table, nor is that the third pitch comprises a number of semitones above the pitch of the depressed key.

**Summary.** In summary, Assayag does not disclose a data table determining a musical sound based on a specific relation between pitch of the already depressed key and pitch of the played key, in response to difference in pitch between the already depressed key and the played key. Moreover, Assayag does not disclose that any one of pitch of the played key, pitch of the already depressed key and third pitch to which the pitch of the already depressed key and pitch set in advance are added, is selected in response to the difference in pitch between the already depressed key and the played key. Accordingly, Assayag does not disclose the instant claims.

Serial No. 10/578,871

(5-6) Claims 2, 3, 5, and 6 are rejected over Assayag in view of Matsuda et al., US 6,316,711. This rejection is respectfully traversed, *inter alia*, on the grounds above and the dependence of these claims.

The Applicant had argued that “the present invention generates not a musical sound of the played key but a resonance, in a position of the played key,” and therefore distinguishes. The Applicant had noted that Matsuda describes volume panning based on the “operated” key position and that Matsuda does not teach any position of resonance, from which the Applicant argued that the claimed feature, “the generated monaural *resonance* being output from left-and-right speakers with a respective volume in accordance with a position of the depressed key to make sound generation position panning,” was not disclosed. The Applicant asserted, “Even if Matsuda were combined with Assayag, it would still only be possible to change the volume of the musical sound of the depressed key or the panning value.”

The Examiner responds that since Assayag discloses resonant notes, the teaching of Matsuda about *non*-resonant notes is applicable. The Examiner’s logic is respectfully questioned. If A teaches a place setting with forks and spoons, and B teaches placing the forks on the left side of the plate, it does not then follow that a combination of A and B would include placing spoons on the left side also. The combination would just as well have the spoons on the right. An inference must be added to put the spoons on the left side.

*Serial No. 10/578,871*

Withdrawal of the rejections is requested.

Respectfully submitted,

KRATZ, QUINTOS & HANSON, LLP

*Nick Bromer*

Nick S. Bromer  
Attorney for Applicant  
Reg. No. 33,478

NSB/lrj

Suite 400  
1420 K Street, N.W.  
Washington, D.C. 20005  
(202) 659-2930

23850

PATENT & TRADEMARK OFFICE

*I hereby certify that this correspondence is being facsimile transmitted to the  
Patent and Trademark Office (Fax No. (571-273-8300) on January 23, 2011.*

*Nick Bromer (reg. no. 33,478)*

Signature *Nick Bromer*